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### ADVERTISEMENT.

This work is the fifteeenth of a series of papers intended to illustrate the collections of Natural History and Ethnology belonging to the United States, and constituting the National Museum, of which the Smithsonian Institution was placed in charge by the act of Congress of August 10, 1846.

It has been prepared at the request of the Institution, and printed by authority of the honorable Secretary of the Interior.

SPENCER F. BAIRD,

Secretary of the Smithsonian Institution.

SMITHSONIAN INSTITUTION,
Washington, April 15, 1879.

## CONTRIBUTIONS

TO THE

# NATURAL HISTORY

OF

# ARCTIC AMERICA,

MADE IN CONNECTION WITH

THE HOWGATE POLAR EXPEDITION, 1877-78,

BY

# LUDWIG KUMLIEN,

NATURALIST OF THE EXPEDITION.

WASHINGTON:
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### INTRODUCTION.

#### BY LUDWIG KUMLIEN.

The vessel conveying the Howgate preliminary Polar Expedition was the "Florence" of New London, Conn. She is a fore-and-aft schooner of fifty-six tons, and was built in Wells, Me., in 1851, for mackerel, and was subsequently used as a scalar in the southern seas.

Although a staunch and fair sea-boat, as far as her diminutive dimensions could allow, a less suitable vessel for the purpose could hardly have been chosen. To say that she was *too* small for thorough scientific work covers the ground, but quite fails to convey a proper idea of what drawbacks all scientific labors were subjected to on this account.

The schooner was fitted out in New London, and sailed on the morning of August 3, 1877, unfortunately at least two months later than desirable, had her object been purely scientific.

The primary object of the expedition, by Captain Howgate's order, was to collect material, skins, skin clothing, dogs, sledges, and Eskimo, for the use of a future colony on the shores of Lady Franklin Bay. The secondary object of the expedition was scientific work; and, thirdly, whaling was to be one feature of the cruise.

So far as the primary object is concerned, the expedition was as successful as could be expected: a large amount of skins was collected and made into clothing; the services of sixteen Eskimo were secured, who were willing to accompany the coming steamer northward; nearly thirty dogs were secured, and several good sledges, with an ample supply of whales' jaw-bones for shoeing the runners for some years.

As has been stated by Captain Howgate, "the peculiar nature of her mission lifted the enterprise from the level of an ordinary whaling voyage to the higher plane of geographical discovery." Every one, except the scientists, had a "lay" in the voyage; and, so far as the crew was concerned, their "lay" was to be their only remuneration; as a natural consequence, whaling became the primary object to them. The expedition was also fairly successful in this direction.

As far as the scientific work is concerned, some valuable work was

done, especially by Mr. Sherman in meteorology; still, nearly all the scientific labors were prosecuted under very disconraging conditions. The lack of any place to work in save a snow-hut on shore, in which neither sufficient light nor heat was to be obtained, rendered it very difficult to prosecute certain investigations. The late date of sailing and the early departure from the winter harbor deprived us of the most interesting and profitable season for scientific research.

The outward trip presented nothing to break the usual monotony of a long sailing voyage: fogs and light winds prevailed till off the north of Resolution Island, when a strong northeast gale was encountered. The schooner was heavily loaded and poorly trimmed, so that some uneasiness for safety was naturally felt, especially as we were close inshore among icebergs and rocks, in a thick fog and on an unknown coast. One boat was stove in and a few barrels of provisions washed from deck; otherwise no damage was done.

The first anchorage was in Niantilie Harbor, on the western shore of Cumberland Sound, September 12, forty-one days after leaving New London. Some natives were secured here, to assist in whaling; and all their worldly possessions, including dogs, sledges, boats, &c., were taken upon the decks, and the schooner weighed anchor and started for the opposite side of the sound. A short stay was made at the Kikkerton Islands, and on the 6th of October the Florence dropped anchor in the little harbor of Annanaetook, at about lat. 67° N., long. 68° 50′ W.

Arrangements were at once begun by Mr. Sherman and myself to erect a shelter that would serve for an observatory and general working-place; an eminence on a little rocky islet in the harbor was chosen for this purpose, and our tent raised. Instrument-shelters were erected, and the meteorological work began in earnest.

As soon as the snow became compact enough, we engaged the Eskimo to build a snow-house for us, in which our tent served as a lining.

It was often difficult to get from the ship to the shore on account of the ice or unusually stormy weather.

We improved every opportunity at this late day to secure specimens; but as the ice soon formed over the sound, our endeavors were far from satisfactory, especially as we were unable to procure a boat with any degree of certainty, as they had to be kept in readiness for whaling.

The winter was spent by Mr. Sherman in taking observations; and to judge from the manner in which he assiduously applied himself to his work, night and day, through all weathers and under the most discour-

aging circumstances, the results of his labors cannot fail to be very valuable and do justice to Mr. Sherman's indefatigable perseverance and scholarly attainments. We spent our time in procuring and taking care of specimens, as well as taking our "watch" at the observatory when not too busy with other work.

From our peculiar surroundings and the isolation to which we were necessarily subjected, we lost much of our wonted enthusiasm during the long, dreary winter, and found rest only in continual work.

The spring of 1878 was stormy and backward, and the prevalence of southerly gales kept the ice closely packed about us till the fore part of July. This treacherous condition of the ice, and early departure from the winter harbor, robbed us of any opportunity to prosecute extended researches, except in the immediate vicinity of the harbor; thus the most valuable season was completely lost to us.

The Florence left her winter harbor on the 6th of July, having all the collected material for the future Arctic colony stored in her hold, and sixteen Eskimo and twenty-eight dogs on deck.

In the unnecessary haste of departure many valuable preparations had to be abandoned for want of time to get them aboard, as well as space to store them.

Short stoppages were made at two or three points on the outward passage from the sound, and on the 19th of July we rounded Cape Mercy and took the pack-ice of Davis Straits. It was on this day that the schooner received the bump which afterwards cost us so much trouble and anxiety.

The pack proved to be quite loose, but extensive, and the floes rather small, but the winds were invariably contrary and quite stiff, and the almost impenetrable fog made the navigation dangerous and tedious; we were often obliged to tie up to a floe and await a "lead" in the pack, or the lifting of the murky fog veil.

Godhavn Harbor, Disko Island, Greenland, was reached on the 31st of July. We were all in high spirits in anticipation of news from home, if not the presence of the expected expedition steamer. Of course the double disappointment was sorely felt.

The advent of the expedition was awaited with great anxiety, more especially as no word had been sent us via Denmark, so we naturally concluded the vessel or vessels were belated from some cause; but when three weeks of waiting brought us no news, the anchor was weighed, and the Florence put on a course for Cumberland once more, to return the Eskimo and their effects to their country.

During our sojourn in Godhaven every attention was paid to our comfort by the highly enlightened Danes resident there, and these three short weeks were to us the most enjoyable of the whole cruise. We pursued our scientific labors here as elsewhere when an anchorage was made, but in this case had the misfortune of being on an old and well-rorked field.

On the evening of the 22d of August, the Florence left Godhaven and sped on a southerly course, with a fair north wind; this soon veered to ESE, and blew a gale. For four days the schooner lay hove-to under close-reefed storm-sail, while the hatches were battened down over the poor natives in the hold. We were entirely at the mercy of the elements and drifted with the sea. An impenetrable fog, with heavy rain, continued the whole time, and we were drifting among hundreds of icebergs, but luckily did not come in contact with any.

On the 27th land was sighted on our starbeard quarter, and subsequent observations proved us to be in the mouth of Exeter Sound! We had drifted completely across Davis Straits.

On the 31st of August we again anchored at Niantilic, and most willingly landed our passengers and all their goods, and enjoyed a few days of rest,—rest from the howling of wind and wave and from the far less musical squall of the juvenile Eskimo and the fiendish howls of the dogs. We could also enjoy the luxury of clean and free decks once more, the first time since June.

On the 12th of September willing hands headed the Florence for home, very glad indeed to near the long-wished-for shores of the United States, but little dreaming of the terrible passage we were about to encounter.

We started with a fair free wind, which soon increased to a gale; and as the size of the schooner forbid scudding with more than a whole sail breeze, we were obliged to heave-to for two days. From this time till the 26th, when we made St. John's, Newfoundland, we were in a continual gale nearly the whole time. At the commencement of each storm, and they followed one another in quick succession, we made a fair run for a few hours, and then hove-to till the storm abated.

On the 11th of October, the Florence left St. John's, Newfoundland, for the United States. The passage was one of unusually severe weather: one storm followed an other before the sea could go down, and to add to our misery the schooner sprang a leak on the evening of the 19th, while earrying a good deal of canvas, with stiff free wind and heavy

head sea. We were somewhere off Sable Island at the time, our exact bearings being unknown to us. The pumps were kept manned, and diligent search made for the leak, but without avail. Such a condition of affairs cast a shadow of gloom over the whole company: our provisions gone, ship leaking badly, and not knowing at what moment it might gain on us; the elements in all their fury let loose, so that we were entirely in their power, drifting helplessly at the mercy of raging billows, without knowledge of our position within a hundred miles. On the evening of October 25, Thatcher's Island lights were sighted, and the Florence seemed to have become animated, for with a fair NW. breeze she sped like a thing of life, and before midnight we saw the reflected lights of Boston on the clouds, and the next morning dropped anchor in Provincetown, Mass. Provisions were secured and some slight repairs made.

On the morning of October 30, the Florence lay alongside of the same dock she had left fifteen months before, every man brought back alive and well.